

velco

TRANSFORM MOBILITY FOR SUSTAINABILITY

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INCREASE ATTRACTIVENESS

OF CYCLING TO DEMOCRATISE ITS USE

Founded in Nantes in April 2016 by Pierre Regnier (President), Romain Savouré (Technical Director) and Johnny Smith (Marketing Director), Velco is pursuing its goal of becoming the European leader in connected solutions for electric bikes by 2024.

Today, with 40 employees in France and Germany, Velco is experiencing strong international technological and commercial development, in line with the dynamics of the bike market. Velco transforms cycle industry professionals with its connected solutions for a carbon-free and safe mobility.

Velco markets two complete offers for the digitalization of brands and bike fleet managers. In addition to the embedded hardware (IoT - Internet of Things) on the bike, Velco offers a software suite to manage the activity of cycling professionals.

Thanks to connectivity, the attractiveness of the electric bike is increased for a better mobility experience for the cyclist and a better profitability for the professionals. The objective is to democratize the bicycle as a means of travel in cities, by providing answers to the various obstacles that prevent its use everywhere and by everyone.

TRANSFORMING MOBILITY

A MAJOR CHALLENGE FOR CITIES TO FACE HYPERURBANISATION



TRANSPORT, ONE OF THE MOST DIFFICULT SECTORS TO DECARBONIZE

By 2050, 68% of the world's population will live in cities (55% today).

With the densification of cities come unavoidable challenges: air and noise pollution, traffic congestion with an increase in travel times and a decrease in transport safety. Transport is one of the most difficult sectors to decarbonize because of its high use of fossil fuels and its dependence on carbon-intensive infrastructure (roads, airports, vehicles and dependence on the car.)

WHY IS THE ELECTRIC CAR AN INSUFFICIENT ANSWER TODAY?

By 2020, only 1 in 50 new cars worldwide will be electric.

Even if every new car were electric, it would take another 15 to 20 years to replace the world's fossil fuel fleet, a transition too slow to meet today's challenges.



An electric car pollutes

30 times less than a thermal car



An electric bike pollutes

10 times less than an electric car

THE SMART CITY* MUST MAKE ROOM FOR THE BIKE.

Cycling is a fast, accessible and efficient answer to decarbonize cities, improve traffic flow, and improve the quality of life and health of city dwellers. The electric bicycle has begun its revolution and its expansion is worldwide:

3 billion €
of revenues in 2020
in Europe
+58% vs 2019

29% of e-bikes or 56% of the total turnover

For the first time, the EAB market in value exceeds that of conventional bicycles.

According to CONEBI (Confederation Of the European Bicycle Industry), sales of electric bike are expected to increase from 3.6 million units in 2019 to 11 million in 2025 in Europe!



^{*}Smart City: city using information and communication technologies to improve the quality of urban services and reduce their costs, meet environmental challenges and ensure the quality of life of city dwellers. Mobility is one of the key issues for cities, with safety, security, accessibility and quality of life requirements.

FROM THE ELECTRIC BIKE TO THE CONNECTED BIKE

In more than 100 years, the bike industry has seen two major technological innovations: **electrification**, which makes it possible to extend distances with ease, and **connectivity**, which makes the bike more intelligent to make it more attractive and safer.

Like the smartphone, the smartbike is becoming the new standard, aligned with a connected lifestyle where services make up the mobility experience.

THE CONNECTED BIKE ADDRESSES THE BARRIERS TO THE PURCHASE AND USE OF ELECTRIC BIKES.



Bike theft

Safety is a major obstacle to the use of bikes, as the infrastructure is not always adapted or sufficient to ensure the cohabitation of all modes of transport in the city.



Safety of cyclists

400,000 in France each year, **300,000 in England** and the same proportions in all EU countries.

However, **66**% of cyclists use their bike less after a theft, and **25**% abandon their bike after a theft.



A frequently used **electric vehicle requires regular maintenance** to ensure its reliability and durability. Guided maintenance can extend the life of the bike, make maintenance easier for cyclists and reduce costs for professionals and individuals.



SUPPORT E-BIKE BRANDS AND FLEET MANAGERS

TO SEDUCE MORE CYCLISTS



2 CONNECTED SOLUTIONS: FOR BRANDS AND FLEET MANAGERS



retain their customers.

Create connected e-bikes with brands and manufacturers to boost their sales, seduce and

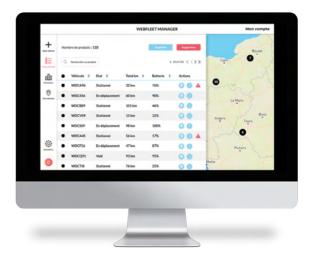
velco fleet

Connect e-bike fleets (cities, rental companies, corporate fleets or B2C) to optimize fleet management: supervision, service, maintenance.

EACH SOLUTION INCLUDES 3 PARTS:



IoT device embedded on the electric bike to collect data.



Business platform for the professional (rider management platform for Velco OEM and fleet management platform for Velco Fleet)





Mobile application for the rider in the brand's colors.

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THE CONNECTED E-BIKE

TO BUILD CUSTOMER LOYALTY AND INCREASE MARGINS

Bike manufacturers or brands will create a connected e-bike or connect an existing bike with Velco. An IoT device is integrated on the e-bike, to collect data. The data is then used in the application for cyclists, with the brand's colors. On its side, the brand exploits the data via a business platform (Velco Business Insight) to manage subscriptions, know the use of its bikes and pilot its activity.

VELCO OFFERS BRANDS A TURNKEY SOLUTION TO:



Offer the best mobility experience to riders



Maximize sales with a complete anti-theft solution



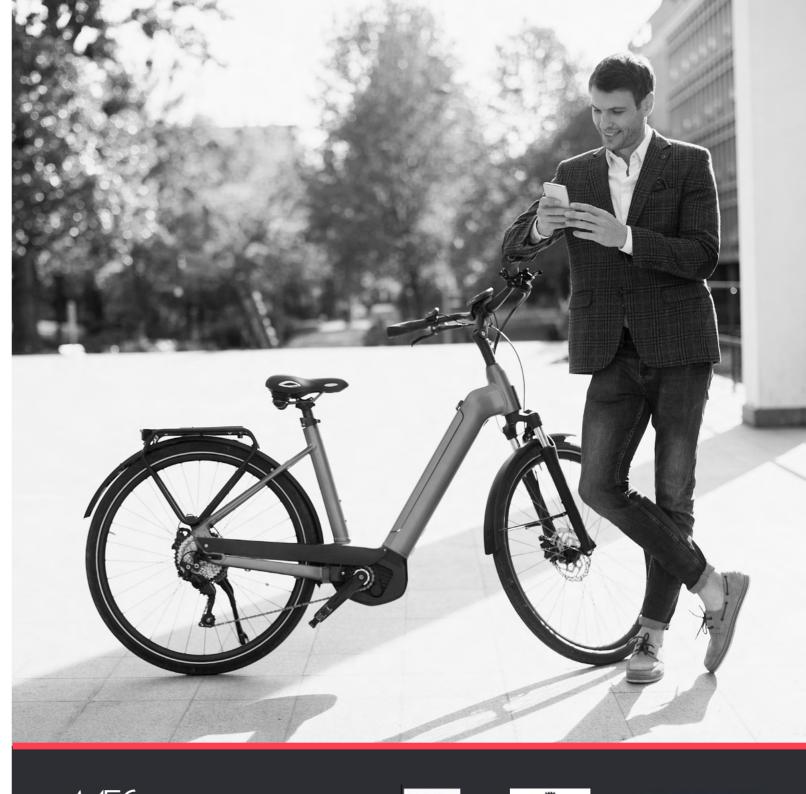
Outperform competitors with additional services



Increasing margins on bike sales through connectivity



Get a direct relationship with the final customer via the brand application



MANUFACTURE FRANCAISE DU CYCLE











THE CONNECTED BIKE

TO IMPROVE

FLEET PERFORMANCE

The fleet manager will connect the e-bikes of his fleet by integrating an IoT device on each bike. Thanks to the data collected on the bikes, he will manage his fleet to optimize the service and its costs via a fleet management platform created by Velco (Velco Fleet Management or API). It offers the connected experience to users through the dedicated mobile application.

VELCO OFFERS FLEET MANAGERS, THROUGH ITS BUSINESS EXPERTISE, A TURNKEY SOLUTION FOR:



Optimize fleet management in real time



Securing your bike fleet



Facilitate maintenance operations (reduce costs and downtime)



Offer a better mobility experience to users (bicycle safety, statistics)



Use the usage data collected to improve bicycle infrastructure





<u>∽</u>starbolt





THE CONNECTED BIKE REENCHANTS

THE MOBILITY EXPERIENCE

OF CYCLISTS

From the cyclist's point of view, the connected electric-bike works with a smartphone. Via a **mobile application in the colors of the bike brand or service**, the bike offers many features that enrich the mobility experience.

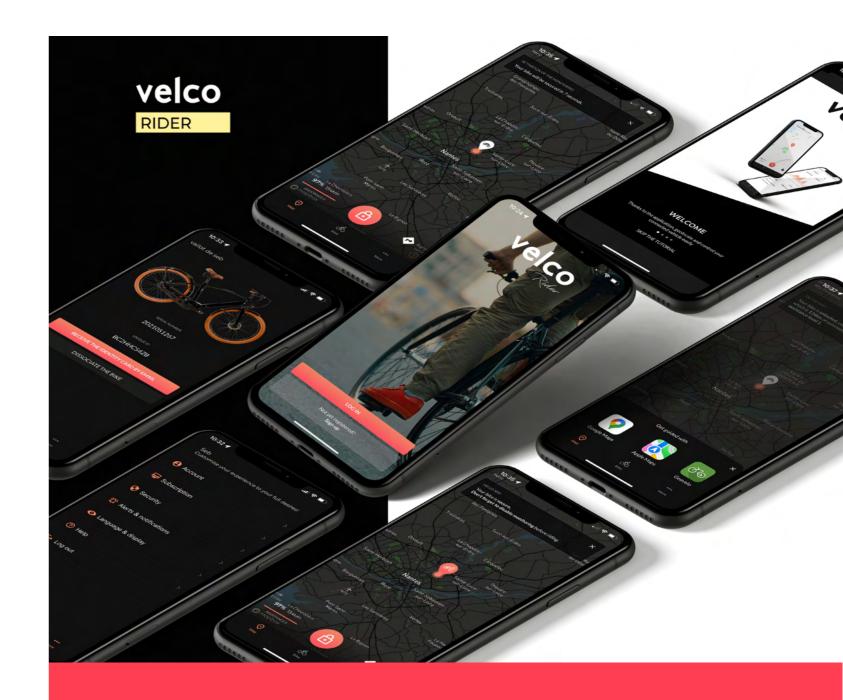
These services require a subscription.



THE SERVICES AND FEATURES OF THE MOBILE APPLICATION

- Suspicious movement detection
- Remote alarm triggering- Real
- Time geolocation of the bike
- Remote power-off
- Real-time information: battery life
- Trip statistics: km covered, average speed
- Maintenance notifications
- Weather forecast to plan your trip
- Fall detection

The services, which are constantly evolving, respond to the problems encountered by cyclists on a daily basis. The smartbike proposes to revitalize and modernize the cycle to make it the bike of the future. New era, new codes, new players, new bikes.



WHAT SERVICES FOR A BIKE CONNECTED BY VELCO?



BIKE SECURITY



INFORMATION AND USAGE STATISTICS



MAINTENANCE ASSISTANCE

AN ECOSYSTEM DEVELOPED TO

DIGITALIZE THE BICYCLE INDUSTRY



Velco is transforming mobility in depth by providing solutions to all players in the bicycle industry: motorists, assemblers, manufacturers and brands, fleet managers, maintainers and cyclists. **The digitalization of the entire industry**, like the automotive industry, will allow its massive and efficient development.

Velco is at the heart of the concerns of cycle professionals, with solid partnerships with engine manufacturers and assemblers. This global vision and knowledge of the players, which goes beyond an approach that only focuses on the cyclist, responds to the major industrial issues of profitability and the solidity of a model, to support the very strong growth of the bike market.





Velco eDrive Monitor is a platform dedicated to motorists, to differentiate their products, improve their services and performances.



ASSEMBLY ASSIST **Velco Assembly Assist** is a tool for assemblers to adapt and facilitate the integration and testing of IoT devices on bikes.



Velco Business Insight enables bike brands to manage relationships with riders and improve products and services by analyzing the usage of their bikes.



Velco Fleet Management allows fleet managers to optimize fleet management in real time to offer a better service at controlled costs.



Velco Diagnostic Service is a tool for maintenance, to make it fast and accurate with real time information from the bike.



Velco Rider is the real-time mobile app that allows cyclists to take advantage of connected bike services for a better mobility experience.

Velco also has an API to collect data and create services within the ecosystem and tools of brands or fleet managers.

AN AMBITIOUS AND INNOVATIVE

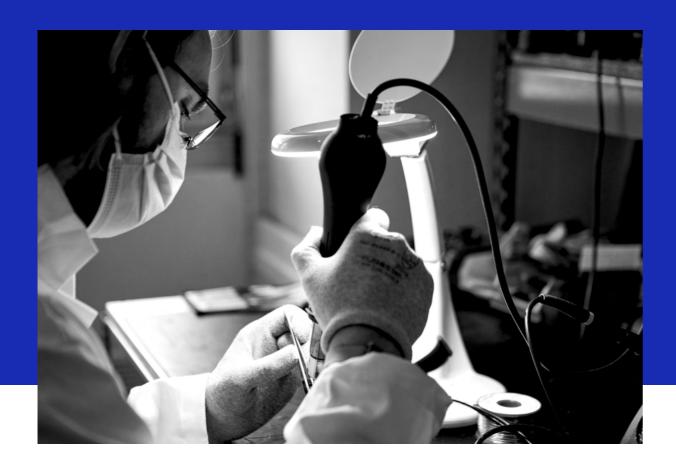
R&D PROGRAM

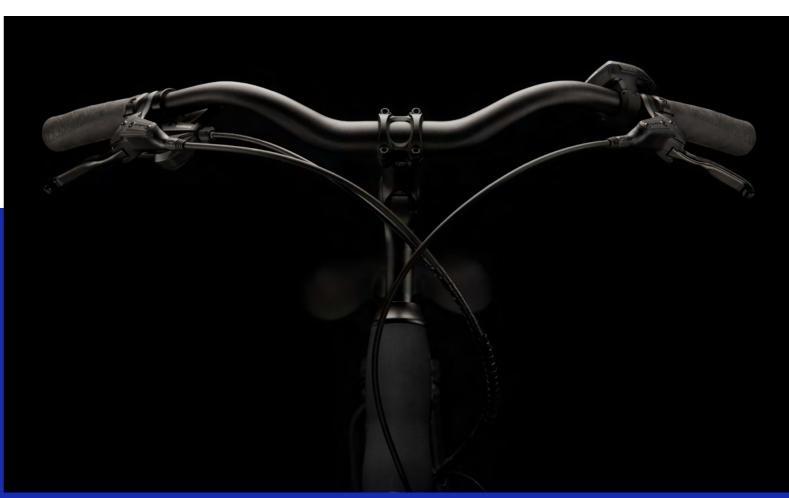
Velco designs all its connected solutions, from **hardware** (IoT products) to **software** (applications).

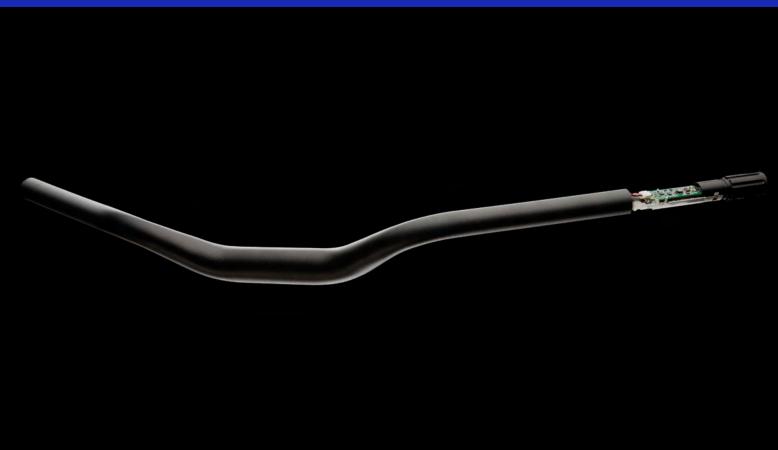
Velco has developed expertise in IoT devices to be integrated on e-bikes, designed by an in-house team accompanied by quality partners for industrialization.

Velco is working to miniaturize technology to successfully integrate radio frequency technologies on EABs to reduce technology integration costs and offer more efficient services. This know-how has led to the filing of four international patents since 2016. This miniaturization and Velco's technological mastery of radiofrequency topics now allow it to successfully implement the technology in the motors or controllers of e-bikes.

IoT devices are designed in France and manufactured in Europe (France and Portugal).







TOWARDS SUSTAINABLE MOBILITY

THANKS TO DATA

HOW DOES CONNECTIVITY ENCOURAGE CYCLING?

All practices are encouraged: personal or professional, alone or with family, sporty or practical, for all age and social class segments. The data collected is put at the service of professionals, cyclists and bike devices:

- A better knowledge of users' behaviors and expectations to better meet their needs (via the right models, the right messages).
- An improvement of bike infrastructure (heatmaps to know the most used routes, the most accident-prone sectors, the lack of secure parking...).
- An increase in the attractiveness of the EAB with an enriched, fun experience, which aims to trigger the purchase but especially the frequency of use of a bike to increase the modal share of the bike.
- A response against bike theft, a real obstacle to the purchase of a bike for cyclists.
- Cost reduction and process optimization for professionals to develop attractive services and products to convince and retain cyclists.



"At Velco, we are driven by the challenge at hand: to increase the attractiveness of the bike in order to transform mobility for sustainability. Like the connected lifestyle of city dwellers, the smartbike is the next standard for the bicycle industry. It is through data and service that the bike will be able to conquer massively and revolutionize travel in urban areas to achieve environmental challenges of decarbonization of transport."

PIERRE RÉGNIER - President and Co-founder of Velco



THE INNOVATIVE AND ESSENTIAL NATURE OF THE SOLUTIONS DEVELOPED BY VELCO HAS BEEN RECOGNIZED AND REWARDED BY:

Top 50 des futures Licorne Françaises : Challenge (FR)

CES 2018 & 2019: Smart Cities & Smart Vehicles Categories (USA)

EUROBIKE 2019: Best bike accessory (DE)

INNOVATE FIETS 2019 : Best Bike Bicycle parts (NL) GERMAN DESIGN AWARD 2019 : E-bike Innovation (DE)

2018 Label of Design Observers (FR) 1st place in the 2017 Lépine contest (FR) Winner Open Cleantech Competition (FR)



velco

Transform mobility for sustainability

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